IN THE CLAIMS:

1-4. (Cancelled)

5. (Previously Presented) A reduced sensitivity spin valve sensor apparatus, comprising:

at least one magnetically fixed layer; and

at least two free layers;

wherein the at least one magnetically fixed layer includes at least two magnetically fixed layers, and wherein the at least two free layers are positioned between the at least two fixed layers; and

wherein the at least two magnetically fixed layers have a parallel magnetic orientation.

6. (Original) The reduced sensitivity spin valve sensor apparatus of claim 5, further comprising at least one non-magnetic spacer positioned between the at least one fixed layer and one of the at least two free layers.

7. (Original) The reduced sensitivity spin valve sensor apparatus of claim 5, wherein the at least one fixed layer includes at least two fixed layers having a magnetic orientation approximately 90 degrees from a magnetic orientation of the at least two free layers.

8. (Cancelled)

9. (Previously Presented) The reduced sensitivity spin valve sensor apparatus of claim 5 wherein the at least two fixed layers and the at least two free layers are spaced from one another by three non-magnetic spacers.

10. (Original) The reduced sensitivity spin valve sensor apparatus of claim 5, wherein a magnetic flux is distributed across the two free layers to thereby reduce a magnetic flux fed to each free layer.

11-14. (Cancelled)

15. (Previously Presented) A method of making a reduced sensitivity spin valve sensor apparatus, comprising:

providing at least one magnetically fixed layer; and

providing at least two free layers

wherein providing the at least one fixed layer includes providing at least two fixed layers, and wherein providing the at least two free layers includes positioning the at least two free layers between the at least two fixed layers; and

wherein the at least two fixed layers have a parallel magnetic orientation.

16. (Original) The method of making a reduced sensitivity spin valve sensor apparatus of claim 15, further comprising providing at least one non-magnetic spacer positioned between the at least one fixed layer and one of the at least two free layers.

17. (Original) The method of making a reduced sensitivity spin valve sensor apparatus of claim 15, wherein providing the at least one fixed layer includes providing at least two fixed layers having a magnetic orientation approximately 90 degrees from a magnetic orientation of the at least two free layers.

18. (Cancelled)

19. (Previously Presented) The method of making a reduced sensitivity spin valve sensor apparatus of claim 15, wherein providing the at least two fixed layers and providing the at least two free layers includes spacing the at least two fixed layers and at least two free layers from one another by three non-magnetic spacers.

20. (Original) The method of making a reduced sensitivity spin valve sensor apparatus of claim 15, wherein a magnetic flux is distributed across the two free layers to thereby reduce a magnetic flux fed to each free layer.

21. (Previously Presented) A reduced sensitivity spin valve sensor apparatus, comprising:

first, second, third, and fourth ferromagnetic material layers being separated respectively from one another by three non-magnetic spacer layers, the first and fourth ferromagnetic material layers being outermost ferromagnetic material layers with respect to the second and third ferromagnetic material layers;

wherein the first and fourth ferromagnetic material layers have parallel fixed magnetization direction;

wherein the second and third ferromagnetic material layers have magnetization directions that can rotate when under applied magnetic fields;

wherein magnetic flux is spread across at least the second and third ferromagnetic material layers to thereby reduce the magnetic flux fed to the second and third ferromagnetic layers.